APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/642,481	08/18/2003	Nobuyuki Enomoto	MA-583-US	3816

21254   7590   10/19/2010
MCGINN INTELLECTUAL PROPERTY LAW GROUP, PLLC
8321 OLD COURTHOUSE ROAD
SUITE 200
VIENNA, VA 22182-3817

EXAMINER
BIAGINI, CHRISTOPHER D

ART UNIT	PAPER NUMBER
2445	

MAIL DATE	DELIVERY MODE
10/19/2010	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Commissioner for Patents
United States Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450
www.uspto.gov

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Application Number: 10/642,481
Filing Date: August 18, 2003
Appellant(s): ENOMOTO ET AL.

Farhad Shir, Ph.D.
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed July 29, 2010 appealing from the Office action mailed

January 29, 2010.

(1) Real Party in Interest

The examiner has no comment on the statement, or lack of statement, identifying by name the real party in interest in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The following is a list of claims that are rejected and pending in the application:

Claims 3-9, 11-15, 18-24, 26-30, 33-39, and 41-45 are pending.

Claims 6, 15, 21, 30, 36, and 45 are withdrawn from consideration.

Claims 3-5, 7-9, 11-14, 18-20, 22-24, 26-29, and 31-44 are rejected.

(4) Status of Amendments After Final

The examiner has no comment on the appellant's statement of the status of amendments after final rejection contained in the brief.

(5) Summary of Claimed Subject Matter

The examiner has no comment on the summary of claimed subject matter contained in the brief.

(6) Grounds of Rejection to be Reviewed on Appeal

The examiner has no comment on the appellant's statement of the grounds of rejection to be reviewed on appeal. Every ground of rejection set forth in the Office action from which the appeal is taken (as modified by any advisory actions) is being maintained by the examiner except

for the grounds of rejection (if any) listed under the subheading "WITHDRAWN

REJECTIONS." New grounds of rejection (if any) are provided under the subheading "NEW

GROUNDS OF REJECTION."

(7) Claims Appendix

The examiner has no comment on the copy of the appealed claims contained in the

Appendix to the appellant's brief.

(8) Evidence Relied Upon

| 6,151,322 | VISWANATH | 11-2000 |
| 2002/0191628 | LIU | 12-2002 |

ANSI/IEEE Std 802.1 D, 1998. Institute of Electrical and Electronic Engineers, Inc.: 1998.
Pages 29-57.

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every

feature of the invention specified in the claims. Therefore, the "destination tag information being

included in a learning frame that said network transmits to *a path opposite to another path in*

which a main signal frame flows" must be shown or the feature(s) canceled from the claim(s).

No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to

the Office action to avoid abandonment of the application. Any amended replacement drawing

sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: the specification lacks antecedent basis for a main signal frame, transmitted "opposite to" a learning frame, having a source address that also made a learning frame transmission request, as recited in claims 3, 8, and 18.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it

pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode
contemplated by the inventor of carrying out his invention.

Claims 3-5, 7-9, 11-14, 18-20, 22-24, 26-29, 33-35, 37-39, and 41-44 rejected under 35

U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The

claim(s) contains subject matter which was not described in the specification in such a way as to

reasonably convey to one skilled in the relevant art that the inventor(s), at the time the

application was filed, had possession of the claimed invention.

Independent claims 3, 18, and 33 all recite the limitation "a source MAC address which

has made a learning frame transmission request, said main signal frame having said source

address and said destination MAC address." The specification provides no clear support for a

main signal frame, transmitted "opposite to" a learning frame, having a source address that also

made a learning frame transmission request.

Any claim not directly addressed above is rejected for at least incorporating the

deficiencies of a parent claim.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the
subject matter which the applicant regards as his invention.

Claims 3-5, 7-9, 11-14, 18-20, 22-24, 26-29, 33-35, 37-39, and 41-44 are rejected under

35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and

distinctly claim the subject matter which applicant regards as the invention.

Independent claims 3, 18, and 33 all recite the limitation "said destination tag information

being included in a learning frame that said network transmits to a path opposite to another path

in which a main signal frame flows." This limitation is so irresolvably unclear as to make it

impossible to determine the metes and bounds of the claim. For example, it is not clear what the

term "opposite" means in connection with paths of a network. It should be noted, as well, that the

specification provides little guidance, as the term "opposite" only appears in sections that are

near-verbatim duplicates of the claims.

Independent claims 3, 18, and 33 further recite the limitation "said main signal frame

having said source MAC address." However, the claims introduce multiple source MAC

addresses; it is unclear to which source MAC address this limitation is intended to refer.

Any claim not directly addressed above is rejected for at least incorporating the

deficiencies of a parent claim.

In the interest of expediting prosecution, the Examiner will endeavor to apply art to the

claims as they would be best understood by a person of ordinary skill in the art.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

Claims 3-5, 7-9, 12, 13, 18-20, 22-24, 27, 28, 33-35, 37-39, 42, and 43 are rejected

under 35 U.S.C. 103(a) as being unpatentable over ANSI/IEEE Std. 802.1D, 1998 Edition

(hereinafter "the 802.1D specification") in view of Viswanath (US Patent No. 6,151,322).

Regarding claim 3, the 802.1D specification shows a network system for a network having plural nodes connected (see Fig. 7.1), wherein a node (comprising a bridge) belonging to said network comprises:

- a CPU (Central Processing Unit, implicitly disclosed as part of the computer-implemented system of the 802.1D specification) executing a learning frame management unit (comprising a forwarding process, which is implemented by a processing unit) which refers to a MAC SA table cache (comprising querying a filtering database) to determine whether a learning frame transmission request of a MAC SA has been is made (comprising determining whether a frame has been received that indicates an address-port mapping: see section 7.9.5 on p. 47 and section 7.8 on p. 42); and

- a memory system (implicitly disclosed as part of the computer-implemented system of the 802.1D specification) that stores:

  - a MAC forwarding table memory (comprising a filtering database) which stores an output port for a destination MAC address (see section 7.9 on p. 42 and section 7.9.2 on p. 44), and

  - the MAC SA table cache which stores a source MAC address which has made a learning frame transmission request (note that entries made by the learning process are based on the source address of frames: see section 7.8 on p. 42).

The 802.1D specification further shows a main signal frame having said source address and said destination address (note that main signal frames—that is, frames which are received after a learning frame has "taught" the bridge a MAC-port correlation—necessarily share sources and destinations with learning frames: see section 7.9 on pp. 42-43.)

The 802.1D specification does not explicitly show:

- that the MAC forwarding table stores destination tag information corresponding to a virtual local area network (VLAN) tagged Ethernet frame, said destination tag information being included in a learning frame that said network transmits to a path opposite to another path in which a main signal frame flows.

Viswanath shows a MAC forwarding table storing destination tag information corresponding to a virtual local area network (VLAN) tagged Ethernet frame (see col. 6, line 56 to col. 7, line 9), said destination tag information being included in a learning frame that said network transmits to a path opposite to another path in which a main signal frame flows (see col. 6, lines 16-20 and col. 7, lines 10-41).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the 802.1D specification with the teachings of Viswanath in order to "provide maximum use of memory and bandwidth resources." See Viswanath, col. 8, lines 47-49.

Regarding claim 4, the combination further shows wherein said nodes comprise an aging request acceptance unit which ages said MAC SA table cache (see first paragraph on p. 45), and a transmission request unit which makes a learning frame transmission request to a CPU (comprising a bridge port which receives a frame and sends it to a learning process, which is implicitly executed by a CPU: see Fig. 7-5 and section 7.8 on p. 42). Note that the learning process uses the learning frame transmission request to manage a table (comprising the filtering database).

Regarding claim 5, the combination further shows wherein said nodes have a learning

management computer-readable medium encoded with a computer program installed thereon

which conducts a learning frame process (see the 802.1D specification, section 7.8 on p. 42).

Regarding claim 7, the combination further shows wherein said node has an equipment

control computer-readable medium encoded with a program which conducts a variety of

configurations (comprising the configuration of reserved addresses, static filtering information,

and traffic class information: see the 802.1D specification, section 7.1.2).

Regarding claim 8, the combination further shows said node comprises a frame type

judgment unit which judges an input frame (comprising a forwarding process, which judges

whether to forward incoming frames, and where to forward them to: see the 802.1D

specification, section 7.7.2).

Regarding claim 9, the combination further shows wherein a node belonging to said

network comprises: an aging control unit which ages an entry to be aged (comprising the unit

which ages entries in the filtering database: see the 802.1D specification, first paragraph of p.

45), and an aging management table which stores an entry to be aged (comprising the filtering

database, which stores the dynamic filtering entries which are aged).

Regarding claim 12, the combination further shows wherein said node comprises a tag

forwarding table memory which stores an output port for a forwarding tag (see Viswanath, col. 6,

line 56 to col. 7, line 9).

Regarding claim 13, the combination further shows wherein said node comprises: a table (filtering database: see the 802.1D specification, section 7.9); an aging circuit (comprising the circuit which ages entries in the filtering database: see p. 45); and a forwarding table having a table read/write circuit (comprising a filtering database, which necessarily has a read/write circuit because it can be read from and written to: see p. 33).

Claims 18-20, 22-24, 27, and 28 are apparatus claims corresponding to system claims 3-5, 7-9, 12, and 13 and are rejected for the same reasons as applied above.

Claims 33-35, 37-39, 42, and 43 are method claims corresponding to system claims 3-5, 7-9, 12, and 13 and are rejected for the same reasons as applied above.

Claims 11, 14, 26, 29, 41, and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over ANSI/IEEE Std. 802.1D, 1998 Edition ("the 802.1D specification") in view of Viswanath (US Patent No. 6,151,322), and further in view of Liu (US Pub. No. 2002/0191628).

Regarding claim 11, the combination does not explicitly show wherein said node comprises a broadcast table memory which stores an output destination port at a time of broadcasting to a tag.

Liu shows a broadcast table memory which stores an output destination port at a time of broadcasting to a tag (see [0023]-[0024]).

It would have been obvious to one of ordinary skill in the art to further modify the 802.1D specification to store an output destination port at a time of broadcasting to a tag in order to prevent the system from having to calculate the port repeatedly (see Liu, [0024]).

Regarding claim 14, the combination does not explicitly show wherein said node comprises a TAG address management table which stores an address of a forwarding tag on a MAC forwarding table memory.

Liu shows a tag address management table which stores an address of a forwarding tag (see [0022]).

It would have been obvious to one of ordinary skill in the art to further modify the 802.1D specification to store an address of a forwarding tag as taught by Liu in order to provide for efficient distribution of broadcast messages to that tag (see Liu, [0007]).

Claims 26 and 29 are apparatus claims corresponding to system claims 11 and 14, and are rejected for the same reasons as applied above.

Claims 41 and 44 are method claims corresponding to system claims 11 and 14, and are rejected for the same reasons as applied above.

(10) Response to Argument

Appellant's arguments will be addressed in the order in which they appear in the Appeal

Brief.

Issue #1: Rejection of claims 3, 18, and 33 under 35 USC 112, first paragraph

Beginning on p. 7 of the Appeal Brief, Appellant argues that the specification does

provide support for the feature "a source MAC address which has made a learning frame

transmission request, said main signal frame having said source address and said destination

address." The Examiner disagrees. In support of this assertion, Appellant points to several

sections of the specification and provides several excerpts. Notably, however, Appellant has not

provided even the barest explanation as to *how* these sections of the specification provide support

for the claimed subject matter. The Examiner has reviewed the cited portions, and maintains that

it is simply not apparent how those sections or any other sections support the limitation. In

particular, there is no clear support for a main signal frame, transmitted "opposite to another

path" from a learning frame, having a source address that also made a learning frame

transmission request.

The most relevant portion identified by Appellant appears to be that at page 109, line 25

to page 110, line 1. This portion at least mentions the main signal frame, but it does not indicate

that the main signal frame has a source address that also made a learning frame transmission

request.

Thus, the Examiner believes that the rejections under 35 USC 112, first paragraph should

be maintained.

Issue #2: Rejection of claims 3, 18, and 33 under 35 USC 112, second paragraph

Beginning on p. 10, Appellant argues that one of ordinary skill in the art would sufficiently understand what is being claimed. The Examiner disagrees.

Applicant has not provided a clear rationale for why the claim language is, in fact, definite, or why the Examiner's analysis on page 4 of the Final Action is faulty. In the arguments, Appellant (1) recites, verbatim, the limitations at issue and declares that they would be understood by one of ordinary skill; (2) points to several disparate sections of the specification, in which the term "opposite" only appears in sections that are near-verbatim duplicates of the claim; and (3) explains that "even when the asymmetrical flow is flown by sending the learning frame through a path opposite to the path where the main signal frame flows, the learning process can be functioned" and "because the tag information is included in the learning frame, the setting of the fowarding tag to be added can be automated." None of the arguments explain what the term "opposite" means in connection with paths of a network.

With respect to the first argument, Appellant's arguments amount to a mere assertion that the claims are definite. The Examiner disagrees, and submits that they are not for the reasons given in the rejection. Specifically, it is not clear what the term "opposite" means in connection with paths of a network. For example, in a typical network switch or router, all of the ports are physically located on the same side of the device. These ports are connected to network cables, which provide "paths" for network traffic. It is not clear on what basis one "path" to the switch may be considered "opposite to" another path.

With respect to the second argument, it is not clear how these sections of the specification are of any help in construing the claims. The language which the Examiner maintains is unclear

is repeated essentially verbatim in the specification; it is no more apparent there what the language means than in the claims. Appellant also points to Figs. 38-43, but these figures are merely "swim lane diagrams" (that is, logical depictions of traffic between nodes), but provide no illustration of the presumably physical property of two network paths being "opposite" one another.

With respect to the third argument, Appellant's argument itself is unclear. A "flow," is, presumably, some collection of traffic on the network. It is not clear what Appellant means by stating that a "flow is flown." Unfortunately, Appellant has failed to reply to the Examiner's request to clarify the argument (see p. 2 of Advisory Action mailed June 11, 2010). Furthermore, even if the asserted benefits of remedying congestion, improving bandwidth usability, and automating the setting of a forwarding tag are realized by the invention, it is not clear how this is of any help in construing the meaning of the claim terms.

Finally, Appellant has not addressed the entirety of the rejection. As explained in the rejection, independent claims 3, 18, and 33 further recite the limitation "said main signal frame having said source MAC address." However, the claims introduce multiple source MAC addresses; it is unclear to which source MAC address this limitation is intended to refer. This statement stands unchallenged in the Appeal Brief.

Thus, the Examiner believes that the rejections under 35 USC 112, second paragraph should be maintained.

Issue #3: Rejection of claims 3, 18, and 33 under 35 USC 103(a)

Beginning on p. 12, Appellant argues that the combination of the 802.1D specification and Viswanath fails to teach or suggest "said destination tag information being included in a learning frame that said network transmits to a path opposite to another path in which a main signal frame flows…said main signal frame having said source MAC address and said destination MAC address." The Examiner disagrees.

Appellant first argues, on pp. 12-13, that Viswanath does not teach the claimed "opposite path." However, Appellant's arguments with respect to Viswanath fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references. Instead, Appellant merely asserts that Viswanath does not teach the limitation at issue. However, Viswanath clearly discloses that "a received data packet may include a VLAN (virtual LAN) tagged frame…that may specify another network" and that the received frame "should be output to a single MAC port or multiple MAC ports" (see col. 6, lines 16-20). Viswanath goes on to explain that, when a VLAN tagged frame is received, "the tag is extracted and the VLAN identifier is stored with the frame." Subsequently, "the rules checker determines, from VLAN information and other header information, from which output port(s) the frame subsequently is to be transmitted." See col. 7, lines 10-41. In other words, the frame is received at a port on one network, and is transmitted to a *different* port or network which may be reasonably construed as being "opposite" to the first port. Accordingly, in light of the deficiencies under 35 USC 112, second paragraph presented above, and giving the claims their broadest reasonable interpretation, the combination of the 802.1D specification and Viswanath renders obvious the limitations at issue.

Appellant next argues, on p. 13, that "these references are unrelated and would not have been combined as alleged by the Examiner." However, both the 802.1D specification and Viswanath deal with network elements that learn attributes of nodes on the network by observing learning frames. In addition, Viswanath even operates in an 802.1D compliant network: see col. 6, lines 13-20. Thus, the Examiner submits that the 802.1D specification and Viswanath are properly combinable.

Appellant still further argues, on p. 13, that there is no motivation to combine the references. The Examiner disagrees. In fact, Viswanath explicitly indicates that "recognition of VLAN tagged frames and the stripping and insertion of VLAN tags provide maximum use of memory and bandwidth resources" (see col. 8, lines 47-49). It is for at least this reason that one of ordinary skill would have been motivated to make the combination.

Thus, the Examiner believes that the rejections under 35 USC 103(a) should be maintained.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related

Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Christopher D. Biagini/

Examiner, Art Unit 2445

Conferees:

/HASSAN PHILLIPS/

Primary Examiner, Art Unit 2445

/Ajay Bhatia/

Primary Examiner, Art Unit 2445